

## **ASPHALT CRACK SEALING MATERIAL**

### **REFERENCES**

- A. AASHTO T 51: Ductility of Bituminous Materials.
- B. AASHTO T 228: Specific Gravity of Semi-Solid Bituminous Materials.
- C. AASHTO T 300: Force Ductility of Bituminous Materials.
- D. ASTM D 3405: Joint Sealants, Hot-Applied, for Concrete and Asphalt Pavements.
- E. ASTM D 4402: Standard Test Method for Viscosity Determination of Asphalt at Elevated Temperatures Using a Rotational Viscometer.
- F. ASTM D 5167: Melting of Hot-applied Joint and Crack Sealant and Filler for Evaluation.
- G. ASTM D 5329: Sealants and Fillers, Hot-Applied, For Joints and Cracks in Asphaltic and Portland Cement Concrete Pavements.
- H. UDOT 8-967 Cold Bend Determination for Hot-Applied Bituminous Concrete Crack Sealants

### **1.4 SUBMITTALS**

- A. For each shipment of material, supply a vendor-prepared bill of lading showing the following information:
  - 1. Type and grade of material
  - 2. Type and amount of additives, used, if applicable
  - 3. Destination
  - 4. Consignee's name
  - 5. Date of Shipment
  - 6. Railroad car or truck identification
  - 7. Project number
  - 8. Loading temperature
  - 9. Net weight in tons (or net gallons corrected to 60 degrees F, when requested)
  - 10. Specific gravity
  - 11. Bill of lading number
  - 12. Manufacturer of asphalt material

## 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Do not supply shipments contaminated with other asphalt types or grades than those specified.

## PART 2 PRODUCTS

### 2.1 HOT-POUR CRACK SEALANT FOR BITUMINOUS CONCRETE

- A. Combine a homogenous blend of materials to produce a sealant meeting properties and tests in Table 1.
- B. Packaging and Marking: Supply sealant pre-blended, pre-reacted, and pre-packaged in lined boxes weighing no more than 30 lb.
1. Use a dissolvable lining that will completely melt and become part of the sealant upon subsequent re-melting.
  2. Deliver the sealant in the manufacturer's original sealed container.
  3. Clearly mark each container with the manufacturer's name, trade name of sealant, batch or lot number, and recommended safe heating and application temperatures.

**Table 1**

Hot-Pour Bituminous Concrete Crack Sealant			
Application Properties:			
Workability:	Pour readily and penetrate 0.25 inch and wider cracks for the entire application temperature range recommended by the manufacturer.		
Curing:	No tracking caused by normal traffic after 45 minutes from application.		
Asphalt Compatibility: ASTM D 5329, Section 14.	No failure in adhesion. No formation of an oily ooze at the interface between the sealant and the bituminous concrete or softening or other harmful effects on the bituminous concrete.		
Material Handling:	Follow the manufacturer’s safe heating and application temperatures.		
Test Methods and Properties			
Test Method	Property	Minimum	Maximum
AASHTO T 51	Ductility, modified <sup>a</sup> , 1cm/min at 39.2EF (4EC), cm	30	
UDOT Method 967	Cold Temperature Flexibility	no cracks	
AASHTO T 300	Force-Ductility <sup>b,c</sup> , lb force		4
ASTM D 5329	Flow at 140EF (60EC), 5 hrs 75Eangle, mm		3
ASTM D 3405	Tensile-Adhesion, modified <sup>d</sup>	300%	
AASHTO T 228	Specific Gravity at 60EF (15.6EC)		1.140
ASTM D 4402	Viscosity at 300EF, SC4-27 spindle, 20 rpm, cP	800	1600

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| <ul style="list-style-type: none"><li><sup>a</sup> Modify Section 5.1 as follows: in filling, pour the material in a thin stream back and forth from end to end of the mold until level full. Do not trim.</li><li><sup>b</sup> Modify Section 5.1 as follows: in filling, pour the material in a thin stream back and forth from end to end of the mold until level full. Do not trim.</li><li><sup>c</sup> Maximum of 4 lb force during the specified elongation of 30 cm @ 1 cm/min at 39.2EF (4EC).</li><li><sup>d</sup> Use ASTM D 3405, Section 6.4.1. Delete bond and substitute tensile-adhesion test in accordance to ASTM D 5329.</li></ul> |
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END OF SECTION